**Amendments to the Specification:**

Please replace paragraph [0021] on page 8 with the following amended paragraph:

**[0021]** Hole transport layer 125 may include a material capable of transporting holes. Hole transport layer 130 may be intrinsic (undoped), or doped. Doping may be used to enhance conductivity. $\alpha$-NPD and TPD are examples of intrinsic hole transport layers. An example of a p-doped hole transport layer is m-MTDATA doped with $F_4$-TCNQ at a molar ratio of 50:1, as disclosed in ~~United States Patent Application No. 10/173,682 to Forrest et al.~~ United States Patent Application Publication No. 2003/0230980, which is incorporated by reference in its entirety. Other hole transport layer materials and structures may be used.

Please replace paragraph [0023] on page 9 with the following amended paragraph:

**[0023]** Electron transport layer 140 may include a material capable of transporting electrons. Electron transport layer 140 may be intrinsic (undoped), or doped. Doping may be used to enhance conductivity. $Alq_3$ is an example of an intrinsic electron transport layer. An example of an n-doped electron transport layer is BPhen doped with Li at a molar ratio of 1:1, as disclosed in ~~United States Patent Application No. 10/173,682 to Forrest et al.~~ United States Patent Application Publication No. 2003/0230980, which is incorporated by reference in its entirety. Other electron transport layer materials and structures may be used.

Please replace paragraph [0026] on pages 10-11 with the following amended paragraph:

**[0026]** Blocking layers may be used to reduce the number of charge carriers (electrons or holes) and / or excitons that leave the emissive layer. An electron blocking layer 130 may be disposed between emissive layer 135 and the hole transport layer 125, to block electrons from leaving emissive layer 135 in the direction of hole transport layer 125. Similarly, a hole blocking layer 140 may be disposed between emissive layer_135 and electron transport layer 145, to block holes from leaving emissive layer 135 in the direction of electron transport layer 140. Blocking layers may also be used to block excitons from

diffusing out of the emissive layer. The theory and use of blocking layers is described in more detail in United States Patent No. 6,097,147 and ~~United States Patent Application No. 10/173,682 to Forrest et al.~~ United States Patent Application Publication No. 2003/0230980, which are incorporated by reference in their entireties. The conventional "blocking layer" is generally believed to reduce the number of charge carriers and / or excitons that leave the emissive layer by presenting an energy barrier that the charge carrier or exciton has difficulty surmounting. For example, hole transport is generally thought to be related to the Highest Occupied Molecular Orbital (HOMO) of a semiconductor. A "hole blocking" material may therefore be thought of as a material that has a HOMO energy level significantly less than that of the material from which the holes are being blocked. A first HOMO energy level is considered "less than" a second HOMO energy level if it is lower on a conventional energy level diagram, which means that the first HOMO energy level would have a value that is more negative than the second HOMO energy level. For example, through the density function theory (DFT) calculation (B3LYP 6-31G*) using the Spartan 02 software package, $Ir(ppy)_3$ has a HOMO energy level of -4.85 eV. BCP has a HOMO energy level of -5.87 eV, which is 1.02 eV less than that of $Ir(ppy)_3$, making it an excellent hole blocker. $ZrQ_4$ has a HOMO energy level of -5.00, only 0.15 eV less than that of $Ir(ppy)_3$, such that little or no hole blocking is expected. *mer*-$GaQ_3$ has a HOMO energy level of -4.63 eV, which is greater than that of $Ir(ppy)_3$, such that no hole blocking at all is expected. If the emissive layer includes different materials with different energy levels, the effectiveness of these various materials as hole blocking layers may be different, because it is the difference in HOMO energy levels between the blocking layer and the blocked layer that is significant, not the absolute HOMO energy level. But, the absolute HOMO level may be useful in determining whether a compound will be a good hole blocker for particular emissive layers. For example, a material having a HOMO energy level of about -5.15 eV or greater may be considered a reasonable hole blocking material for $Ir(ppy)_3$, which is a desirable emissive material. Generally, a layer having a HOMO energy level that is at least 0.25 less than that of an adjacent layer may be considered as having some hole blocking properties. An energy level difference of at least 0.3 eV is preferred, and an energy level difference of at least 0.7 eV is more preferred. Similarly, the energy of an exciton is generally believed to be related to the band gap of a material. An "exciton blocking" material may generally be thought of as a material having a band gap significantly larger than the material from which excitons are

being blocked. For example, a material having a band gap that is about 0.1 eV or more larger than that of an adjacent material may be considered a good exciton blocking material.

Please replace paragraph [0027] on pages 11-12 with the following amended paragraph:

**[0027]** Generally, injection layers are comprised of a material that may improve the injection of charge carriers from one layer, such as an electrode or an organic layer, into an adjacent organic layer. Injection layers may also perform a charge transport function. In device 100, hole injection layer 120 may be any layer that improves the injection of holes from anode 115 into hole transport layer 125. CuPc is an example of a material that may be used as a hole injection layer from an ITO anode 115, and other anodes. In device 100, electron injection layer 150 may be any layer that improves the injection of electrons into electron transport layer 145. LiF / Al is an example of a material that may be used as an electron injection layer into an electron transport layer from an adjacent layer. Other materials or combinations of materials may be used for injection layers. Depending upon the configuration of a particular device, injection layers may be disposed at locations different than those shown in device 100. More examples of injection layers are provided in ~~U.S. Patent Application Serial No. 09/931,948 to Lu et al.~~ United States Patent Application Publication No. 2004/0174116, which is incorporated by reference in its entirety. A hole injection layer may comprise a solution deposited material, such as a spin-coated polymer, e.g., PEDOT:PSS, or it may be a vapor deposited small molecule material, e.g., CuPc or MTDATA.

Please replace paragraph [0029] on pages 13 with the following amended paragraph:

**[0029]** A protective layer may be used to protect underlying layers during subsequent fabrication processes. For example, the processes used to fabricate metal or metal oxide top electrodes may damage organic layers, and a protective layer may be used to reduce or

eliminate such damage. In device 100, protective layer 155 may reduce damage to underlying organic layers during the fabrication of cathode 160. Preferably, a protective layer has a high carrier mobility for the type of carrier that it transports (electrons in device 100), such that it does not significantly increase the operating voltage of device 100. CuPc, BCP, and various metal phthalocyanines are examples of materials that may be used in protective layers. Other materials or combinations of materials may be used. The thickness of protective layer 155 is preferably thick enough that there is little or no damage to underlying layers due to fabrication processes that occur after organic protective layer 160 is deposited, yet not so thick as to significantly increase the operating voltage of device 100. Protective layer 155 may be doped to increase its conductivity. For example, a CuPc or BCP protective layer 160 may be doped with Li. A more detailed description of protective layers may be found in ~~U.S. Patent Application Serial No. 09/931,948 to Lu et al.~~ United States Patent Application Publication No. 2004/0174116, which is incorporated by reference in its entirety.